

Claims

1. A joining structure in a laminate (1) comprising metal layers (3-6) as well as at least one adhesive layer (12) which is enclosed by the metal layers (3-6), which metal
5 layers (3-6) each comprise separate metal-layer parts (7, 8) having a pair of overlapping edges (9, 10), which pairs of edges (9, 10) are offset with respect to each other and together define a joining region (2), characterized in that the laminate (1) comprises a section (14) which is of standard construction and a section (15) which contains an additional, internal reinforcing metal layer (16), said reinforcing metal layer (16)
10 comprising two reinforcing metal-layer parts (17, 18) with a pair of overlapping edges (19, 20), said pair of edges (19, 20) being located outside the joining region.
2. The joining structure as claimed in claim 1, in which each of the metal layers (3-6) has a metal-layer part (7) with a jogged edge (9) in such a manner that the metal-
15 layer parts (7, 8) are substantially in line with one another.
3. The joining structure as claimed in claim 2, in which a reinforcing metal-layer part (17, 18) is jogged (23) over the jogged edge (9) of the jogged metal layer part (7) to form a jogged portion (26).
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4. The joining structure as claimed in claim 3, in which the jogged portion (26) of the reinforcing metal-layer part (17, 18) is then jogged (24) in the opposite direction towards the other, associated metal-layer part (8) to form a second jogged portion (27).
- 25 5. The joining structure as claimed in claim 4, in which the reinforcing metal-layer part (17) is subsequently jogged (25) in the same direction as said jogged edge (9) of the jogged metal-layer part (7) over the other reinforcing metal-layer part (18) to form a third jogged portion or jogged edge (19).
- 30 6. The joining structure as claimed in claim 5, in which a metal-layer part (7) of a further metal layer (6) extends over the portion (27), jogged (24) in the opposite direction, of the reinforcing metal-layer part (17) to form a spacing between the edge (9) of the metal-layer part (7) and the portion (27), jogged (24) in the opposite

direction, of the reinforcing metal-layer part (17), in such a manner that the edge (10) of the other metal-layer part (8) of the further metal layer (6) extends as far as the region where this spacing occurs.

- 5 7. The joining structure as claimed in claim 6, in which the other metal-layer part (8) is jogged, from the region where this spacing occurs, over the edge (19) of the reinforcing metal-layer part (17) jogged in the same direction, and is then jogged in the opposite direction.
- 10 8. The joining structure as claimed in one of the preceding claims, in which the edges (9, 10, 19, 20) of the reinforcing metal-layer parts, in the direction transverse to the direction in which the edges (9, 10, 19, 20) overlap, are of different sizes in order to provide a stepped joggle arrangement (28, 29) of the metal layer (6) covering the reinforcing metal-layer parts (17, 18).
- 15 9. The joining structure as claimed in one of the preceding claims, in which each adhesive layer (12) runs on continuously over the overlapping edges (9, 10, 19, 20).